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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,898	12/01/2000	Thomas William Birdwell	13DV13419	3672

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EXAMINER

LU, KUEN S

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/727,898

Applicant(s)

BIRDWELL ET AL.

Examiner

Kuen S. Lu

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendments

1. The Action is responsive to the Applicant's Amendments, filed on May 16, 2005.
2. The Applicant's newly presented claims 2-7 are noted. Also noted is the Applicant's amendments made to the independent claim 1, wherein new issue was raised when the limitation "converting existing NDE test data to the standard data format" was **amended** to "converting existing NDE test data including a plurality of different formats into the standard data format". In order to address the new issue, the Examiner has introduced a new reference in the Office Action for Final Rejection (hereafter "the Action") as shown next.
3. Concerning the Applicant's Remarks on claim rejections, filed on May 16, 2005, has been fully considered by the Examiner. Please see discussion in the section ***Response to Arguments***, following the Action.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (U.S. Patent 6,721,676) in view of Koch et al. (U.S. Patent 5,628,319, hereafter "Koch"), and further in view of Hosack et al. (U.S. Patent 6,511,426, hereafter "Hossack").

As per claim 1, Ueda teaches the following for managing data:

"providing a predetermined standard data format" for "test data" (See Figs. 3-4 and col. 4, line 54 – col. 5, line 16 wherein Ueda's supplied data as a result of functional simulation of an integrated circuit is equivalent to Applicant's providing a predetermined standard data format for test data);

Ueda does not teach the predetermined standard data format is specifically for NDE test data, although Ueda, at col. 3, lines 20-50, teaches the management of the data is for the purpose of semiconductor testing.

However, Koch teaches non-destructive testing data receiving, conversion and transmission (See Figs. 1-2 and col. 5, line 48 – col. 6, line 14).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Koch with Ueda reference because both references are dedicated to testing process and testing data management, and the combined teaching would have allowed Ueda's system to utilize Koch's teaching on precision determination of the maximum signal amplitude and its timing, to further enhance its ability to maintain desired accuracy and precision for testing semiconductor devices.

The combined teaching of the Koch and Ueda references does not specifically teach "converting existing NDE test data including a plurality of different formats into the standard data format", although it teaches "converting existing NDE test data into the standard data format" (See Ueda: Figs. 3-4, 15B-15D and col. 4, line 54 – col. 5, line 16 wherein Ueda's conversion of the simulation data to the data in the form of a flowchart, and Koch: Figs. 1-2 and col. 5, line 48 – col. 6, line 14 wherein non-destructive testing data is received, converted and transmitted, is equivalent to Applicant's converting existing NDE test data to the standard data format).

However, Hossack teaches test data including a plurality of different formats and generating into two- or three- dimensional representations at col. 9, lines 15-30.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Hossack further with the Koch with Ueda references because the references are dedicated to non-destructive testing, testing process, testing data conversion, and testing data collection and display, the combined teaching of the references would have enabled a non-destructive testing system capable of achieving required accuracy while displaying testing results in friendly fashions of two- or three- dimensional representations and images. For further details, please refer to the backgrounds of the cited inventions.

The combined teaching of the Hossack, Koch and Ueda references further teaches the following:

"adding the converted NDE test data to a computer database associated with a computer network" (See Ueda: col. 6, lines 49-52 wherein Ueda's test data formed may

be stored in a storage device, and Koch: Figs. 1-2 and col. 5, line 48 – col. 6, line 14 wherein non-destructive testing data is received, converted and transmitted, is equivalent to Applicant's adding the converted NDE test data to a computer database associated with a computer network); and "transmitting the converted data over the network" (See Ueda: col. 9, lines 16-23 wherein Ueda's testing code is available from data communication network suggest the network is available for transmitting the converted data).

As per claim 2, the combined teaching of Hossack, Koch and Ueda references further teaches "the plurality of different data formats comprise at least one of a TVF format, an ASCII format, and an VDE format" (See Hossack: col. 9, lines 15-30 wherein Hossack's TIFF format is introduced to display video image data frames is equivalent to Applicant's the plurality of different data formats comprise at least one of a TVF format, an ASCII format, and an VDE format).

As per claim 3, the combined teaching of Hossack, Koch and Ueda references further teaches "the standard data format is based at least in part on a Digital Image Communication in Medicine (DICOM) format" (See Hossack: col. 9, lines 15-30 wherein Hossack's video image data frames are exported into DICOM format is equivalent to Applicant's the standard data format is based at least in part on a Digital Image Communication in Medicine, DICOM format).

As per claim 4, the combined teaching of Hossack, Koch and Ueda references further teaches "the converted NDE test data to a computer database comprises storing images on the computer database" See Ueda: col. 6, lines 49-52 wherein Ueda's test data formed may be stored in a storage device, and Koch: Figs. 1-2 and col. 5, line 48 – col. 6, line 14 wherein non-destructive testing data is received, converted and transmitted, and Hossack: Fig. 1 and col. 15, lines 40-45 wherein device is provided to store images, is equivalent to Applicant's the converted NDE test data to a computer database comprises storing images on the computer database).

As per claim 5, the combined teaching of Hossack, Koch and Ueda references further teaches "transmitting the converted data over the network comprises transmitting images over the network" (See Hossack: Fig. 17, col. 41, lines 26-30 and col. 42, lines 9-18 wherein Hossack's teaching on DICOM standard for storing and transmitting images on network is equivalent to Applicant's transmitting the converted data over the network comprises transmitting images over the network).

6. Claim 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (U.S. Patent 6,721,676) in view of Koch et al. (U.S. Patent 5,628,319, hereafter "Koch"), and Hossack et al. (U.S. Patent 6,511,426, hereafter "Hossack"), as applied to claim 1, and further in view of Norris et al. (U.S. Patent 5,920,828, hereafter "Norris").

As per claim 6, the combined teaching of Hossack, Kocj and Ueda references teaches steps of managing NDE test data as previously described in claim 1 rejection.

The combined teaching does not specifically teach "locating the converted NDE test data on the first computer database using a cataloging server", although Ueda specifically teaches storing test data in storage for later use at col. 6, lines 49-52.

However, Norris teaches using a central database and tape catalog server to gather, process and locate seismic test data in Fig. 1 and col. 10, lines 14-17.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Norris with the Hossack, Koch and Ueda references because the references are dedicated to non-destructive testing, testing process, testing data conversion, and testing data collection and display, and further combined teaching would have equipped the system with a central relational database and cataloger for maintaining integrity and enhancing processing capabilities in a 3-D representations and real-time environments. For further details, please refer to the backgrounds of the cited inventions.

As per claim 7, the combined teaching of Norris, Hossack, Kocj and Ueda references further teaches "locating the converted NDE test data comprises locating an image" (See Hossack: col. 9, lines 15-30 wherein Hossack's TIFF format is introduced to display video image data frames, and Norris: col. 10, lines 22-25 wherein Norris' seismic data files are indexed and cataloged and located is equivalent to the Applicant's locating the converted NDE test data comprises locating an image).

7. The prior art made of record

- A. U.S. Patent 6,721,676
- B. U.S. Patent 5,628,319
- E. U.S. Patent 6,511,426
- F. U.S. Patent 5,920,828

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- C. U.S. Patent 6,499,125
- D. U.S. Patent 6,018,713

Response to Arguments

8. The Applicant's arguments filed on May 16, 2005 have been fully considered. As for the Examiner's response, please see discussion below.

a). At Pages 3-5, concerning claim 1, the Applicant argued that the that the Examiner failed to establish *prima facie* case of various by providing suggestion or motivation for combining the Ueda and Koch references, and further alleged that the Examiner "pieced together" the teachings of cited arts to render the claimed invention obvious. The Applicant also briefly described the ultrasonic wave signal and simulation test data of the two said references.

As to the above argument a), the Examiner respectfully submits that the claim rejection is based on the invention as claimed in the claim language in light of the

specification, instead of reading specification into the claim limitations. The subject matter as claimed involves an extremely wide scope of coverage in the areas of test data and non-destructive testing. Please note the Koch and Ueda references are dedicated to and specifically and commonly teach non-destructive testing, testing process, testing data conversion, and testing data collection and display.

In order to further address the newly raised issue of "including a plurality of different data formats into the standard format", the Examiner has introduced the Hosack reference to provide the teaching.

In response to applicant's arguments that the teachings as provided are "pieced together" and there is no suggestion or motivation to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Hossack, Koch and Ueda references compensate each other in the areas of generic testing data management, non-destructive testing data collection and display, and 2-D or 3-D test data representations and management, including transmitting on the network.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching from the references of (Koch and Ueda) and (Hossack, Koch and Ueda), respectively for enhancing the combined system's

ability to maintain desired accuracy and precision for testing semiconductor devices and achieving required accuracy while displaying testing results in friendly fashions of two- or three- dimensional representations and images.

9. As to the newly presented dependent claims (2-7), which directly depend on independent claim 1, the Examiner introduces the Norris reference to further address the newly introduced limitations in the claimed subject matter, and applies the above stated arguments for the independent claim 1.

10. In light of the forgoing arguments, the 35 U.S.C. § 103 rejections for claims 1-7 is hereby sustained.

Conclusions

11. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

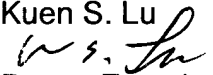
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S. Lu whose telephone number is 571-272-4114. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kuen S. Lu

Patent Examiner

July 20, 2005


Mohammad Ali

Primary Examiner

July 20, 2005